

Remarks:

These remarks are responsive to the Office action dated July 13, 2010. Prior to entry of this response, claims 1-14 were pending in the application. By way of this response, claims 1, 3, 5, 6, 10, and 14 are amended. Applicants respectfully request reconsideration of the application and allowance of the pending claims.

Rejections under 35 U.S.C. § 103

Claims 1 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 7,050,800 (Shaheen et al., hereinafter Shaheen) in view of U.S. Patent No. 6,987,985 (Purkayastha et al., hereinafter Purkayastha).

Applicants traverse the rejection of claim 1. Nevertheless to further prosecution of the subject application, Applicants have amended claim 1 to recite:

A device for converting Universal Mobile Telecommunication System – Frequency Division Duplexing (UMTS-FDD) signals into Wireless Local Area Network (WLAN) signals, comprising:

a receiver unit for receiving the UMTS-FDD signals, wherein the device converts the UMTS-FDD signals received into the WLAN signals, and wherein the device further converts the UMTS-FDD signals received into signals according to a Public Switched Telephone Network (PSTN) standard and/or an Integrated Service Digital Network (ISDN) standard;

means for providing or transmitting the WLAN signals; and

means for providing or transmitting the signals according to the PSTN standard and/or the ISDN standard;

wherein the device is installed at a point in a building where the UMTS-FDD signals cannot provide suitable UMTS-FDD signal coverage to an interior region of the building, and wherein at said point the UMTS-FDD signals are received by the device, and from said point the device transmits the WLAN signals to provide the interior region of the building with WLAN signal coverage.

The device of claim 1 is installed at a point in such a building where signal coverage from outside exists, such as near a window or door, so that the device receives UMTS-FDD signals. Further, the device converts the UMTS-FDD signals to WLAN signals and PSTN and/or ISDN signals and transmits the WLAN signals and the PSTN and/or ISDN signals to provide WLAN signal coverage and PSTN and/or ISDN signal coverage to the interior region of the building that does not receive suitable signal coverage. In other

words, the device acts as a WLAN and PSTN and/or ISDN access point which can directly provide a (mobile) user terminal with WLAN signals and PSTN and/or ISDN signals.

Accordingly, the device of claim 1 directly provides WLAN signal coverage and PSTN and/or ISDN signal coverage to a region of a building that would otherwise not be provided with any type of signal coverage. Moreover, the device of claim 1 provides WLAN signal coverage and PSTN and/or ISDN signal coverage in a single device without any other aids (e.g., relay stations, established networks, etc.), so that even in so-called “dead zones” in the building, wherein “deep indoor” problems exist, an apparatus (e.g., mobile phone, notebook, etc.) is provided with enough WLAN signal strength and PSTN and/or ISDN signal strength to enable communication.

In contrast, Shaheen does not disclose the claimed configuration. Rather, Shaheen requires two separate devices to convert a UMTS signal to a WLAN signal and then transmit the WLAN signal. In particular, Shaheen discloses a converter 16 that merely interfaces between an established WLAN system and a UMTS by converting messages between WLAN and UMTS formats. Shaheen requires a separate WLAN access point 14 to broadcast the converted WLAN signal. Shaheen does not disclose a single device that converts UMTS-FDD signals into WLAN signals and PSTN and/or ISDN signals and transmits the WLAN signals and the PSTN and/or ISDN signals to provide WLAN signal coverage and PSTN and/or ISDN signal coverage to an interior region of a building that does not receive suitable signal coverage as required by amended claim 1.

Moreover, Shaheen does not explicitly disclose receiving and converting UMTS-FDD signals, as well as converting UMTS-FDD signals to PSTN and/or ISDN signals and transmitting the PSTN and/or ISDN signals. Lacking the claimed features, Shaheen fails to achieve the potential benefits to solve the “deep indoor” signal coverage problems discussed above of the claimed configuration.

Furthermore, Purkayastha does not cure the deficiencies of Shaheen. In particular, Purkayastha does not disclose a device that converts the UMTS signals received into the WLAN signals and further converts the UMTS-FDD signals received into signals according to a PSTN standard and/or an ISDN standard, and provides or transmits the WLAN signals and the signals according to the PSTN standard and/or the ISDN standard.

Rather, Purkayastha merely discloses a mobile wireless unit (WTRU) that provides a continuous connection to a receiver while switching from a wireless connection of a first type to a wireless connection of a second type. The switching mechanism is activated when the signal quality of the activated connection decreases. As such, only the first connection type or the second connection type is active at one time. Purkayastha does not convert signals from the first type to the second type. Moreover, it is necessary that the network infrastructure of Purkayastha supports both connection types of the WTRU otherwise the mechanism leads to connection losses.

On the other hand, the device of the present invention works as a bridge converting one signal type (UMTS) to another signal type (WLAN, ISDN, PSTN) requiring at least two connection types to be active simultaneously in parallel.

Accordingly, the combination of Shaheen and Purkayastha does not disclose each and every element of amended claim 1, and thus does not solve the “deep indoor” problems addressed by the device of claim 1. Therefore, Applicants respectfully request the rejection of claim 1 be withdrawn. Claim 5 depends from claim 1. Thus, Applicants respectfully request the rejection of claim 5 be withdrawn for at least the reasons discussed above.

Claims 2-4, 10, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shaheen and Purkayastha as applied to claim 1, and further in view of U.S. Patent No. 7,251,227 (de Jong et al., hereinafter de Jong).

As discussed above, Shaheen and Purkayastha do not disclose each and every element of amended claim 1. Furthermore, de Jong does not disclose a device that converts the UMTS signals received into the WLAN signals and further converts the UMTS-FDD signals received into signals according to a PSTN standard and/or an ISDN standard, and provides or transmits the WLAN signals and the signals according to the PSTN standard and/or the ISDN standard. Rather, de Jong discloses a multimode communication device enabled by a UMTS core network 310 to convert UMTS speech packets to standard packets for a mobile switching center (MSC) (col. 3, lines 20-34). In other words, the multimode communication device disclosed by de Jong is a network side device that requires the UMTS core network be in place in a building to provide the

interior region of the building with suitable WLAN and PSTN and/or ISDN coverage. In contrast to de Jong, the device of claim 1 is a client side device that does not require other aids (e.g., relay stations, established networks, etc.), so that even in so-called “dead zones” in the building, wherein “deep indoor” problems exist, an apparatus (e.g., mobile phone, notebook, etc.) is provided with enough WLAN signal strength and PSTN and/or ISDN signal strength to enable communication.

Moreover, de Jong does not disclose a direct conversion between UMTS-FDD signals and PSTN and/or ISDN signals. In particular, the UMTS signal exchange disclosed by de Jong is limited to the interface between the multimode communication device 310 (shown in FIG. 3) and access network 340. The access network 340 is connected to the network AMT-backbone, which forwards only the payload data of the UMTS packets received by access network 340 to the components TRAU 310 and MSC 330 which transmits the received data to a PSTN network 370. The message exchange between the AMT-backbone, TRAU, and MSC is apparently not based on UMTS signal connection. Thus, MSC 330 does not convert UMTS-FDD signals to PSTN and/or ISDN signals as required by claim 1.

Thus, even in combination Shaheen, Purkayastha, and de Jong do not disclose each and every element of amended claim 1. Therefore, Applicants submit claim 1 is in condition for allowance. Claims 2 and 14 depend from claim 1. Thus, Applicants respectfully request the rejection of claims 2 and 14 be withdrawn for at least the reasons discussed above.

Furthermore, Applicants have amended claims 3 and 10 to include features similar to amended claim 1 that are not disclosed by the combination of Shaheen, Purkayastha, and de Jong. Thus, even in combination Shaheen, Purkayastha, and de Jong do not disclose each and every element of amended claims 3 and 10. Therefore, Applicants respectfully request the rejection of claims 3 and 10 be withdrawn. Claim 4 depends from claim 3. Thus, Applicants respectfully request the rejection of claim 4 be withdrawn for at least the reasons discussed above.

Claims 6 and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shaheen, Purkayastha and de Jong as applied to claim 3, and further in view of U.S. Patent Application Publication No. 2003/0035471 (Pitsoulakis).

As discussed above, the combination of Shaheen, Purkayastha, and de Jong does not disclose each and every element of amended claims 3 and 10. Furthermore, Pitsoulakis does not disclose a device that converts the UMTS signals received into the WLAN signals and further converts the UMTS-FDD signals received into signals according to a PSTN standard and/or an ISDN standard, and provides or transmits the WLAN signals and the signals according to the PSTN standard and/or the ISDN standard. Thus, even in combination Shaheen, Purkayastha, de Jong, and Pitsoulakis do not disclose each and every element of amended claims 3 and 10. Therefore, Applicants submit claims 3 and 10 are in condition for allowance. Claim 6 depends from claim 3 and claims 11-13 depend from claim 10. Thus, Applicants respectfully request the rejection of claims 6 and 11-13 be withdrawn for at least the reasons discussed above.

Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shaheen and Purkayastha as applied to claim 1, and further in view of U.S. Patent No. 6,956,846 (Lewis et al., hereinafter Lewis).

As discussed above, Shaheen and Purkayastha do not disclose each and every element of amended claim 1. Furthermore, Lewis does not disclose a device that converts the UMTS signals received into the WLAN signals and further converts the UMTS-FDD signals received into signals according to a PSTN standard and/or an ISDN standard, and provides or transmits the WLAN signals and the signals according to the PSTN standard and/or the ISDN standard. Thus, even in combination Shaheen, Purkayastha, and Lewis do not disclose each and every element of amended claim 1. Therefore, Applicants submit amended claim 1 is in condition for allowance. Claims 7-9 depend from claim 1. Thus, Applicants respectfully request the rejection of claims 7-9 be withdrawn for at least the reasons discussed above.

Conclusion

Applicants believe that this application is now in condition for allowance, in view of the above amendments and remarks. Accordingly, Applicants respectfully request that the Examiner issue a Notice of Allowability covering the pending claims. If the Examiner has any questions, or if a telephone interview would in any way advance prosecution of the application, please contact the undersigned attorney of record.

Please charge any cost incurred in the filing of this response, along with any other costs, to Deposit Account No. 503397.

Respectfully submitted,

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